

## A List of the moths from the Amami Islands (I)

By AKITO KAWAZOE<sup>1)</sup> and MASAMI OGATA<sup>2)</sup>

## Introduction

Since 1957 KAWAZOE has been making collecting trip every year to the Amami Group situated at the northeast part of the Loochoo Islands with a view to investigate the Insect Fauna there. Collection of moths was started in the same year, and thorough investigation followed in 1959, and of the Macrolepidopterous moths about 350 species have been found so far. Most of them were unrecorded from this region and some are considered as new species.

It is not too much to say that moths in this region are little known till now; some records in the past are so fragmentary that they are not sufficient to clarify the fauna of this region. Many specimens including fairly large amount of moths have been collected by the Nazé Agricultural Experimental Station since prewar days. Many specimens of the moths are bearing the labels identified by Dr. AKIRA KAWATA, but the authors have not heard of any report on this collection. It is expected, however, that Mr. MASAHUMI SAKAE in charge in this station might produce a report on this collection.

The Amami Islands consist of Amami-Oshima (its main island), the satellite isles, and besides Kikaiga-Shima, Okino-Erabu-Jima, and Yoron-Jima. Ohshima and Tokuno-Shima are mountainous islands composed of the mesozoic and paleozoic beds while all the others are the even elevated coral reefs. These two islands are much more suited for collecting, and the taking is almost from Ohshima. Ohshima, in lat. 28°20' N. and long. 129°30' E. at Nazé, 718 km<sup>2</sup> in area, with the peak of 694 m. at Mt. Yuwandake, has the annual lowest temperature of 14.2°C in Jan., the annual precipitation being 2996mm. The whole island are covered with subtropical evergreen latifoliate trees, on the coast flourish the screw-pines (*Pandanus tectorius*), the Cycads (*Cycas reroluta*), Indian Laurels (*Ficus retusa*) etc., and it forms the best environment for insects to live. But in this island the dangerous vipers, Habus (*Trimeresurus flavoviridis*) are active at night, and moreover the lack of the electrical accomodation makes the moths collecting extremely risky and difficult. This will no doubt account for the poor work so far done with the moths of this island.

In this paper only the species actually caught are described. Description will be done in order of the classification, but some species still under investigation are put aside for later report. The contents of this description deal with the macrolepidopterous moths of 20 families including family Noctuidae (45% of specific number) and Geometridae (23% of the same), omitting the microlepidopterous moths for another report. Collecting was done mainly at the following places:

1. Nazé city: a. Saiwai-chô. b. Ohshima Prefectural High School Dormitory. c. Seisan-machi.  
In this paper these are all called merely as Nazé.
2. Yuwan: Ukenon Yuwan.
3. Taken: Ukenon Taken.
4. Mt. Yuwandake, about the summit.
5. Yakugachi: Sumiyôson Yakugachi.
6. Shin-mura: Sumiyôson Shin-mura.

## Acknowledgment

The authors wish to express their thanks for the kind advice to Dr. SYUTI ISSIKI and also for the loan of precious specimens to Dr. AKIRA MUTUURA, Messrs. TUYOSI KODAMA, IENORI FUJIYAMA and KANJI KISHI. Gratitude is furthermore expressed to Mr. MASAHIDE YOSHIDA for his advice in preparing this paper and to Messrs. HIROSHI IMANAKA, YUICHI WADA and Mrs. TOKUKO OHSUGI for their friendship during the last trip to the Amami Islands and to Miss KAZUKO MASUDA, Messrs. NORIHUMI NAKAYAMA, CHUGI MORITA, SUNAO SATO and SEIICHIRO TAMURA for their kind help and cooperation.

1) 2-9, Ebisu Honmachi, Naniwa-ku, Osaka

2) 3-18, Imabashi, Higashi-ku, Osaka

## Family THYRIDIDAE

In this family the authors found 6 species, all of which have been recorded from the Amami-Islands and among them 3 are hitherto unknown to our country. All of them were uncommon and only 1~3 specimens of each species were obtained.

*Rhodoneura myrsusalis* WALKER (Fig. 18)

List Lept. Het. Br. Mus. 19: 892, 1859.

This species is very widely distributed all over Africa through South-Eastern Asia as far as South America. But in our country this record is the first. Forewing general colour yellowish grey and has some vitreous spots in the middle. It is said that their ground colour is various and generally brownish, yellowish or greyish.

Small, length of forewing 10mm, expanse 21mm.

1 ♂, Yakugachi, 13 VIII 1961.

*Rhodoneura semitesselata* WALKER (Figs. 1, 2. & 19)

Journ. Linn. Soc. Lond. 7: 73, 1863.

General appearance well-proportioned, the body and the wings large-sized and strong for genus *Rhodoneura*. Upperside groundcolour reddish yellow-brown, the outer half darker in both wings; forewing with widespread hyaloid network in submarginal and outer lineal areas; hindwing with the similar network except for apical area, and inconspicuous spots in the discoidal cell. Scales generally slender; the surface of the hindwing covered with hairs. Underside very pale, forewing with a slender blackish spot running obliquely from the marginal corner of cell 4 into cell 6. Hind tibia flat and entirely covered with hairs and long scales. Palpus erect, the second segment covered with dense scaling, the third segment small.

♂ length of forewing 15~16mm, expanse 32~35mm.

1 ♂ Taken, 22 VIII 1960; 1 ♂ Nazé, 5 VIII 1961; 1 ♂ China (Okino-Erabu-Jima), 31 VII 1961.

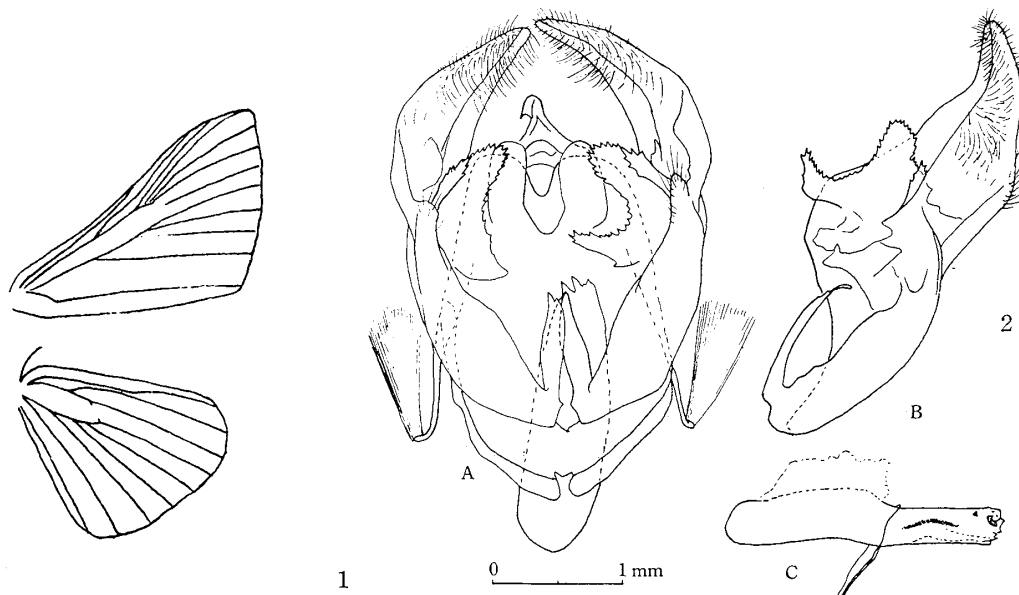


Fig. 1 Venation of *Rhodoneura semitesselata* WALKER

Fig. 2 Genitalia of *Rhodoneura semitesselata* WALKER

A:abdominal side B:right valva C:phallus

This species differs from the other Japanese *Rhodoneura* by the sturdy-built body and specially by the pectinate antenna. The authors think it is necessary in the near future to separate a new

genus, including this species, from the large genus *Rhodoneura* to which belong very many tropical or subtropical species. According to M. GAEDE (SEITZ, Gross-Schmett. Vol. X, S. 775) this species was found from Hinter-India, Sunda Isls. and New-Guinea.

*Camptochilus sinuosus* WARREN (Fig. 20)

Novit. Zool. 3; 342, 1894.

Already known from Formosa, West China and East India (Manipur). This species has such curious shape and pattern that it is often erroneously treated as belonging to other family, for instance, such as family DREPANIIDAE by Dr. M. MATSUMURA. Forewing generally yellow and has a brownish mark with a light costal spot in the outer part of mid-costa; hindwing reddish and meshy at the basal.

♂ length of forewing 12~17mm, expanse 26~33mm.

1 ♂ Taken, 28 III 1959; 1 ♂, Nazé, 30 IV 1960 (T. KODAMA et A. MUTUURA leg.); 1 ♂, Yuwan, 14 VIII 1961.

*Striglina scitaria* WALKER

List. Lep. Het. Br. Mus. 26:1488, 1862.

1 ♂, Mt. Yuwandake, 15 VIII 1961.

*Striglina suzukii* MATSUMURA

Thous. Ins. Jap. add. 4:953, T 71, f 9, 1921.

Somewhat smaller than the specimens from Honshû, ♂ length of forewing 10mm, expanse 19mm.

1 ♂, Mt. Yuwandake, 15 VIII 1961.

*Hypolamprus marginepunctalis* LEECH (Figs. 3 & 4)

Entom. 22:66, t 4, f 10, 1889.

Veins 8 and 9 branch from the joint stem starting from apex of discoidal cell in forewing, veins 6 and 7 of hindwing approach to each other at the roots. This species was described from the specimens from Satsuma by LEECH as *Microsca marginepunctalis*. Recently this species was caught from Kii

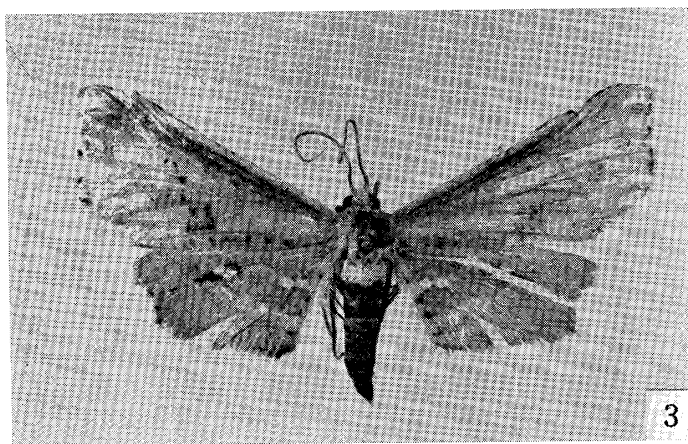


Fig. 3 *Hypolamprus marginepunctalis* LEECH

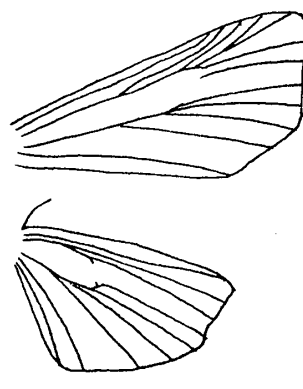


Fig. 4 Venation of *H. marginepunctalis* LEECH

Peninsula by Dr. S. ISSIKI and from Sata-Misaki by Mr. YASUDA. ♂ expanse 27mm. It is regrettable that the specimen is not fresh and the wings are broken.

1 ♂, Nazé, 30 IV 1960 (T. KODAMA et A. MUTUURA leg.)

Family COSSIDAE

Only one species which is newly recorded from Japan was taken by Mr. KANJI KISHI, as follows:

*Zeuzera coffeae* NIETN (Figs. 5 & 21)

Enn. Coffee tree. 21, 1861.

Considerably similar to *Z. leuconotum* BUTLER which is common in Japan, but distinguishable from it at first sight by the body and wings being much more whitish.

Upperside of the plumose Antenna covered entirely with white scales; thorax white, with smaller black spots at the back; abdomen also white, and has blueish black spots at the side and the back in each segment; on the surface of the forewing scatter the light-coloured slender spots, and most of them are grey while those at the basal, costal, and anal ridges and the ends of each vein being black; hindwing scarce of the marking or spotting, and has only black ends in veins 1c~8. It weighs much on our mind that the specimen has a very white abdomen with small black spotting in spite of its being white and having black stripes as shown by M. MATSUMURA.

This species is already known from India, Ceylon, Java, Borneo, and Formosa.

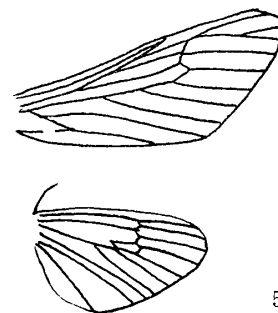
1 ♂, Nazé, 13 VII 1960 (K. KISHI leg.)

## Family HETEROGENEIDAE

6 species including 3 new ones. Only one is known in this part of our country.

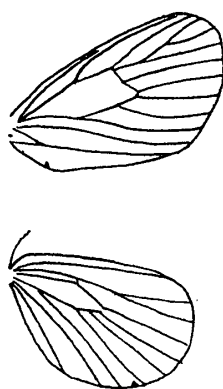
*Narosa amamiana* sp. nov. (Figs. 6, 7 & 22)

Apparently resembles to *Narosa corusca* WILEMAN from Formosa, but this new species is large-sized and paler-coloured, still more distinct from it by the lines. Head and thorax yellowish. Palpus, the second segment is long and stout, erect and extends above the vertex at the front of the face; third segment short and pointed. Groundcolour of forewing is pale brown and that of hindwing whitish yellow, with rug-like lustre which is especially vivid on veins. Scales on both wings erected, only upon veins are they flat. The shape of wings is round, with similar curves. Forewing generally is yellowish pale brown but costal and discoidal areas are whitish yellow. Marginal and submarginal pale yellow lines, running parallel with the outer margin of the wing disappear in the inner half. From one large brown patch between submarginal line and discocellular obliquely runs a yellow postmedial line, the inner brown area is separated from pale yellow veins in each cell. Medial and antemedial lines also pale yellow, appear on the inner half of wing, and end vertically to the inner



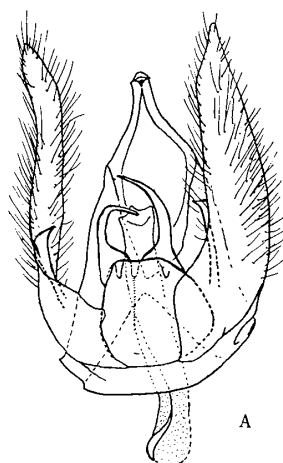
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Fig. 5 V<sup>n</sup> nation of *Z. coffeae* NIETN

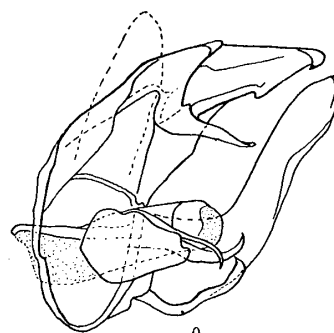


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Fig. 6 Venation of *Narosa amamiana* sp. nov.



A



B

0 1 mm

7

Fig. 7 ♂ genitalia of *Narosa amamiana* sp. nov.

A: in abdominal aspect

B: observed from oblique below, the left valva is cut away.

margin of wing. Basal marking is missing or not traceable. No marking or lining s on the hindwing; the costal is white, the rest of the area is pale yellow. Underside of both wings is monocoloured, yellowish or whitish.

On forewing veins 7~9 branch from one stem after leaving discoidal cell, 10 starts from the cell to the apex, 11 from the 2/3 point from the base of radius, curves and then runs alongside 12. On hindwing vein 8 is separated from the basal of discoidal cell.

♂ length of forewing 10~12mm, expanse 22~25mm.

Holotype: 1 ♂, Yuwan, 19 VII 1961

Paratypes: 1 ♂, Taken, 28 III 1959; 1 ♂, Nazé, 14 VIII 1960; 1 ♂, ditto, 5 VIII 1961;

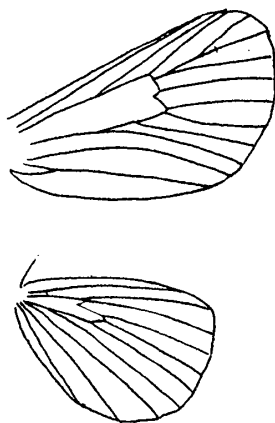
1 ♂, Mt. Yuwandake, 15 VIII 1961; 1 ♂, ditto, 7 VIII 1961; 2 ♂♂, ditto, 11 VIII 1961; 1 ♂, ditto, 14 VIII 1961.

This species is common in Amami-Oshima.

*Arbelarosa issikii* sp. nov. (Figs. 8, 9 & 23)

Head reddish orange. Palpus large, but not extending over vertex; the second segment reddish orange except for deep brown inside, appressed against face, stout and fat, entirely covers frons; the third segment yellow, tiny little, the basal half plunges into the tip of second one. Antenna, greyish brown except for one third of basal which is paler and yellowish; a third of basal remarkably pectinated, the rest suddenly turns serrate and gradually ciliate. Prothorax brown tinged with yellow except for the front which is reddish orange, meso- and metathorax brown; tegula strikingly yellowish white with pale brown scales at the upper front. Legs yellow except for the inside which is brownish with reddish brown hairs; the outsides of tibiae of all legs thickened with yellow hairs; hind tibia with two pairs of spurs.

Forewing triangular, outer margin roundish; groundcolour brown, the outer half along costa brown tinged with yellowish brown, subbasal and central areas darkish brown, basal paler with light brown



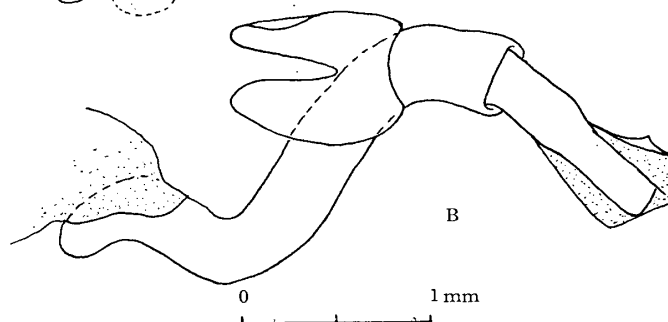
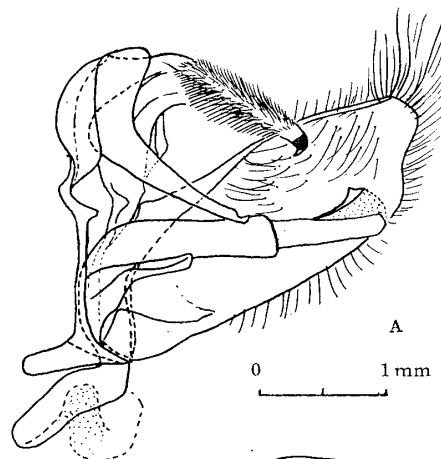
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Fig. 8 Venation of *Arbelarosa issikii* sp. nov.

Fig. 9 ♂ genitalia of *Arbelarosa issikii* sp. nov.

A: interior, the left valva is cut away.

B: Phallus with juxta, in abdominal aspect



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scales, the outer half reddish brown. On mid-inner marginal area below vein 2a quadrilateral patch of conspicuous pattern striped with brownish red and yellow: each stripe is, in due order from basal, red, bright lemon yellow, brownish red, orange yellow, brownish red and orange lastly, and first two stripes with crank-shaped bends. On discocellular a small discus spot, reddish brown, surrounded with fine yellow ring. Submarginal line inconspicuously reddish, bordered distinctly from in- and outside, runs from subcosta to anal along the outermargin with constant width.

Hindwing greyish brown, darker than basal area of forewing except for inner area which is reddish with pale reddish brown hairs.

Underside paler and more reddish than upperside; forewing brown, costal area yellowish brown, inner marginal area reddish pale brown, discoidal cell greyish brown; hindwing also brown, only innermarginal area reddish in cells 1-a and 1-b.

Abdomen reddish brown with some scales blending brown and yellow, caudal margin of each segment and ventral surface yellowish and pale; anal tuft grey.

Venation: on forewing veins 7~9 with a stem starting from discocellular, 11 from radius not strongly curved; on hindwing, discoidal cell small, veins 6 and 7 distant each other, 8 connected to the cell near base with short branch.

♂ length of forewing 13mm, expanse 27mm.

It leaves almost no room for doubt that this fine species will be closely related to *A. mediodorsata* HERING from Borneo, which is, judging from HERING's description, different from our species by the following: existence of two well-rounded black spots on the anal area of forewing; the mid inner patch is composed of the three stripes which are respectively darker, reddish and darker from basal outwardly, and that these stripes lean outwards.

The authors examined a specimen from Hyuga, Kyûshû and added it as one of paratypes. This is the first record of this species from Kyûshû.

Holotype: 1 ♂, Nazé, 30 IV 1960 (T. KODAMA et A. MUTUURA leg.)

Paratypes: 2 ♂♂, ditto, 30 IV 1960 (do); 1 ♂, Hyuga, Tano, Kotani, 26 VI 1951 (H. TSUJI leg.)

*Belippa horrida* WALKER (Fig. 24)

List Lep. Het. Br. Mus. 32:477, 1865.

This fine species hitherto found in South China and Formosa is readily separable from all Japanese Heterogeneid species by the following characteristics: the long or narrow forewing, groundcolour black mixed with brown; inconspicuous yellowish postmedial line barely traceable, the outer area of which is black from costa to space 4, apex white with a small black disk; submarginal area below the apex is black with white veins in spaces 5 & 6, semitransparent white with black veins in 3 & 4, and blackish near the inner angle in 1-a & 2. Hindwing with blackish brown groundcolour, costal margin darker, and anal angle black. Underside of forewing blackish brown, costal area light brown, marginal area white from apex to cell 3 except for the part of cells 5 & 6 which is triangularly black, cell 7 with a black disk on whitish ground; hindwing blackish brown, outer marginal area darker. Cilia dark brown with palely yellow-brownish base and palely greyish extremity.

Head brown, frons projects forwards. Palpus light brown, the third segment conical and very dwarfish. Antenna yellowish brown with short combs to the end. Thorax brown; Patagium blackish; tegula blackish brown with white margin at the end; on subdorsal surface of metathorax a pair of tufts with deep black bristle. Legs light brown with dark brownish bristled tuft on each tibia. Abdomen blackish brown, inconspicuously striped with brown; anal tuft light brown.

This is the first record of this species from our country and only one male was captured by T. KODAMA and A. MUTUURA.

♂ length of forewing 15mm, expanse 33mm.

1 ♂ Nazé, 30 IV 1960 (T. KODAMA et A. MUTUURA leg.)

*Narosoideus flavidorsalis* STAUDINGER, ssp. (Fig. 25)

Rom. Mém. Lép. 3: 195, 1887.

The specimens taken of this species are different from the typical Honshū race, *N. flavidorsalis flavidorsalis* STAUDINGER: body and wings much more reddish or iron-rusty; forewing with or nearly without very weak leaden luster, lusterless patch on the outside of discocellular disappears, no yellowish area beyond the postmedial line, reddish brown instead of yellow at basal inner area in cells 1-a & 1-b; hindwing much darker brown, veins not relieved against groundcolour; underside of both wings red brown and not yellowish; legs also red-brown with the same colored hairs.

The decision as to whether these from Amami Ohshima belong to the subspecies *formosicola* MATSUMURA or to the peculiar race in this region will have to await further study of the Formosan specimens.

♂ length of forewing 14~17mm, expanse 33~37mm.

2 ♂♂, Yuwan, 2 VIII 1959; 3 ♂♂, Mt. Yuwandake, 7 VIII 1961;

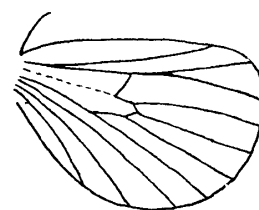
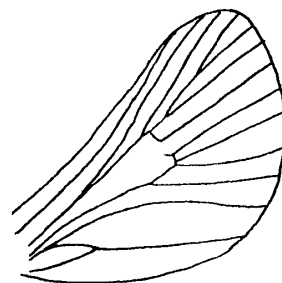
2 ♂♂, ditto, 11 VIII 1961; 1 ♂, ditto, 15 VIII 1961; 1 ♂, Yakugachi, 13 VIII 1961.

*Praesetora japonica* sp. nov. (Figs. 10 & 26)

Head flat, pale brown. palpus pale brown with deep brown dorsum, extending forwards, length equal to diameter of the eye; the second segment fat and stout, the third one tiny little and flat. Antenna pale brown with double pectination; inner pecten short with length of 0.25mm at base and 0.20 mm at centre while outer one longer with length of 0.55mm at base and shortend gradually, equal in size to inner pecten at centre; at the end of antenna, 0.8mm, turns to ciliate form. Thorax brown, tegula the same colour. Legs brown; fore and mid tibiae dark brown, hind one with two pairs of spurs and covered with pale long hairs; each leg brown except for the base of tibia which is pale brown. Abdomen pale brown.

Forewing greyish brown mixed with dark brown, costal and inner marginal areas suffused with brown; pale greyish brown outward from dark brownish submarginal line which runs straight; postmedial line rather indistinct, dark brown, curved inwards to the middle of inner margin. Hindwing pale greyish brown, inner area covered with darkish long hairs. Underside of both wings pale brown.

Venation: Forewing, apex of discoidal cell somewhat extended outwards, veins 7 and 8 + 9 have a joint stem which starts from apex of the discoidal cell, very nearly from the same point starts



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Fig. 10 Venation of *P. japonica* sp. nov.

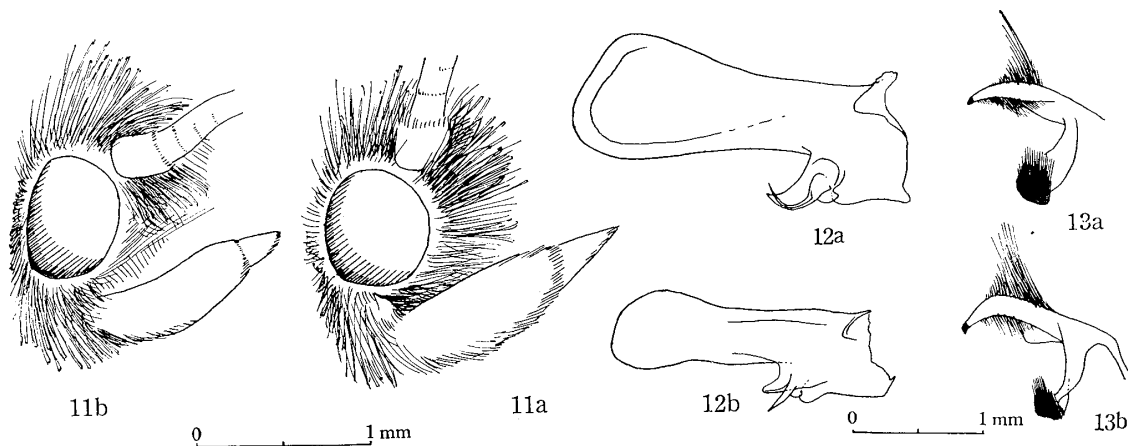


Fig. 11 : Palpi and ♂-genitalia of two species of genus *Phrixolepia*

Fig. 12 the left valva (abriges hairs)

Fig. 13 : uncus with gnathos.

a : *P. sericea* from Honshū, b : *P. tenebrosa* sp. nov.

vein 10, 11 straight; hindwing, veins 6 + 7 with short joint stem, 8 starts from base on the cell.  
♂ length of forewing 10mm, expanse 20mm.

Holotype: ♂, Nazé, 21 VII 1961

The present new sombre species resembles *Praesetora divergens* MOORE, but is separable from it by the submarginal line running closely along outer margin on forewing.

*Phrixolepia tenebrosa* sp. nov. (Figs. 11, 12, 13 & 27)

This new species bears a close resemblance to *Phrixolepia sericea* BUTLER from Honshû, Shikoku, Kyûshû and Hokkaidô, but differs from it as follows: smaller in size and, without exception, darker in colouring; palpus slender, the second segment somewhat bending backwards, the third one shorter than in *sericea*; the male specimen of which only one was captured has its postmedial line on forewing bends in form "W", while the females have "V" or "W" line. The male genitalia are also more or less dissimilar by smaller and relatively slender valva with a sword-like process scarcely bending at sacculus while in *P. sericea* valva is large and sacculus has a process curved like a bow, and by uncus bending downward which is not so in *sericea*.

♂ length of forewing 8mm, expanse 18mm; ♀ length of forewing 9~10mm, expanse 20~22mm.

Holotype: 1 ♂, Yakugachi, 13 VIII 1961

Allotype: 1 ♀, Mt. Yuwandake, 15 VIII 1961;

Paratypes: 1 ♀, Mt. Yuwandake, 23 VIII 1960; 1 ♀, ditto, 7 VIII 1961; 1 ♀, ditto, 15 VIII 1961.

Family EPIPLEMIDAE

5 species of this family were captured. 2 of them were already known, while 3 were newly caught in this group of islands. 4 species will be reported in the present paper leaving one which is still under authors' study. This particular one species has a *Dirades*-like shape and a singular venation, and needs further through investigation until it can be reported.

*Epiplema cretacea* BUTLER

Trans. Ent. Soc. Lond. 1881: 414, 1881

Common in Amami Ohshima. 1 ♀, Ohganeku, 27 VIII 1960 (I. FUJIYAMA leg.); 1 ♂, Nazé, 30 IV 1960 (T. KODAMA et A. MUTSUURA leg.); 1 ♂ 1 ♀, Mt. Yuwandake, 2 VIII 1959; 1 ♂ 7 ♀ ♀, ditto, 7 VIII 1961; 1 ♂ 3 ♀ ♀, ditto, 11 VIII 1961; 1 ♀, Naze, 5 VIII 1961; 1 ♀, Taken, 8 VIII 1961; 4 ♂ ♂, Yakugachi, 13 VIII 1961; 1 ♂ 1 ♀, Yuwan, 14 VIII 1961.

*Epiplema flavistriga* WARREN

Novit. Zoolg. 8: 21, 1894,

Fewer than the foregoing, but not rare. 2 ♀ ♀, Nazé, 30 IV 1960 (T. KODAMA et A. MUTSUURA leg.); 1 ♂, Taken, 18 VIII 1960; 1 ♂, Yuwan, 17 VIII 1960; 1 ♂, ditto, 14 VIII 1961; 1 ♂ 1 ♀, Mt. Yuwandake, 11 VIII 1961; 2 ♂ ♂, ditto, 7 VIII 1961.

*Balantiucha mutans minuscula* ssp. nov. (Figs. 14, 15, 28 & 29)

Ann. Mag. Nat. Hist. (5) 19 : 434,

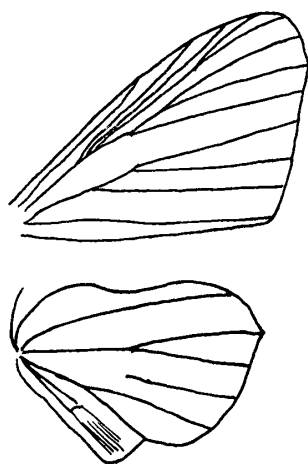
The species which will be described here has a good likeness to some nearly related ones of the same and allied genus such as typical race of *B. mutans* BUTLER from Salomons, Aru, Timor and Trobriand Isls., *Dirades leucocera* HAMPSON from Ceylon, *D. adjutaria* WALKER from India and Ceylon, *D. conifera* MOORE from Ceylon, *D. alikangensis* STRAND from Formosa etc. It is possible that this species belongs to one of them, but it has something a little different from them according to each description. Having had no chances to study these kindred species, the authors have no knowledge as to how closely related this species is to each of them. However in their opinion it is nearest to *B. mutans* BUTLER, hence they assume it is its subspecies in our country.

Head dark brown with snow-white tuft like a trapezoidal shingle-roof on the vertex. Antenna brown with snow-white scaring on basal upper surface; densely pectinate and plank-like at sight in the male, ciliate in the female. Palpus dark brown, moderately long, nearly to the diameter of the eye, extends forward; the third segment sharply pointed. Patagium dark brown. Thorax and



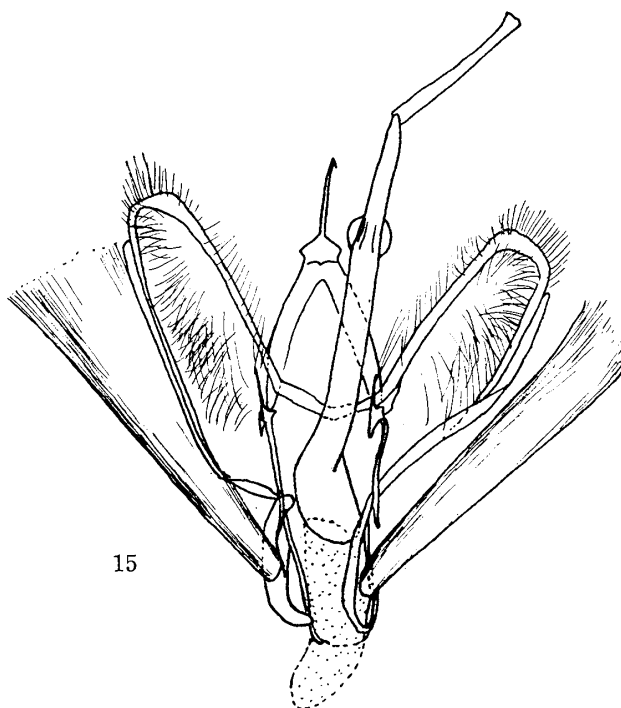
abdomen brown; tegula large, paler, consists of large scales.

Forewing brown, triangular, scattered entirely with tiny wavy lines of dark brown; the outer marginal line finely wavy, its external area brown mixed with white scales, in the area near each cell-end a fine black spot is distributed; outer line light yellowish or whitish brown with dark red-brownish gradational shade along the basal side, starting from two third distance from basal of costa, running obliquely with similar curves and disappearing at vein 4; inner line also light brown with similar shade along the outer marginal side, starting from the middle of costa, near basal point, running parallel or more oblique with outer line, and on cell 3 disappears or turns to obscure bending inward to inner marginal spot; the area between both lines darker; a large triangular spot on the inner margin is blackish brown except for the paler or bluish brown interior, and is bordered with yellowish fine line.



14

Fig. 14 Venation of. *B.*  
*mutans minuscula* ssp.  
nov.



15

Fig. 15 ♂ genitalia of *B.*  
*mutans minuscula* ssp.  
nov.

Hindwing almost roundish, with a small toothlet at vein 7 in the male or two teethlet at veins 4 and 7 in the female, brown with violet gloss in fresh specimens; in the male inner marginal area is folded with a white long hair-pencil; costal margin wound, on the basal part clustered with hairs; outer marginal line reddish yellow-brown with white or yellowish fine wavy centre line, in its outward some exceedingly small blackish dots which often disappear; outer line white, curved almost parallel with the outer margin, in the female protrudent dully at vein 4, at the starting point in costal margin is one black dot; inner line also white, running straight in the first half and, in the female, bends in form of "W", to the end of mid-inner margin, while in the male it bends only once and disappears into the inner folding; the area between both lines darker, particularly on the inner half, and the nearer the outline, the deeper in colour. Underside of both wings much paler, but more whitish in hindwing, without lines or markings.

♂ length of forewing 7mm, expanse 15~16mm; ♀ length of forewing 7~11mm, expanse 15~22mm.

Holotype: 1 ♂, Yakugachi, 13 VIII 1961;

Allotype: 1 ♀, Mt. Yuwandake, 11 VIII 1961;

Paratypes: 1 ♀, Mt. Yuwandake, 2 VIII 1959; 1 ♂ 2 ♀ ♀, ditto, 11 VIII 1961; 1 ♂, ditto, 15 VIII 1961; 1, ♂, Yuwan, 22-VIII 1960; 1 ♂ 1 ♀, ditto, 19 VII 1961; 1 ♂, Tōjō, 24 XII 1960; 2 ♀ ♀, Nazé 21 VII 1961; 3 ♂ ♂ 4 ♀ ♀, ditto, 5 VIII 1961; 3 ♂ ♂ 2 ♀ ♀, Yakugachi, 13 VIII 1961.

This species resembles to *Dirades leucocera* HAMPSON, but differs from it by the groundcolour of hindwing which is brown or violet brown and by the yellow-brownish ciliae. The groundcolour of the latter is, according to G. F. HAMPSON's original description (Ill. Lep. Het. Br. Mus., 8, P. 102, 1891), deep chocolate and its ciliae are white. According to M. GAEDE *Dirades leucocera* is nothing but *Balantiucha mutans* BUTLER, but his illustration in SEITZ' Tafeln is different from HAMPSON's description. It is hard to regard the figure as the correct representation, but as to the concise description on *B. mutans*, SEITZ entirely corresponds to these specimens except for the size being smaller than nominated race (expanse 22~25mm), and accordingly the authors consider both species are the same. Common in Amami-Oshima.

*Metorthochilus emarginatum* HAMPSON (Figs. 16 & 30)

Ill. Typ. Het. Br. Mus. 8:113, 1891.

This rare species of queer shape for the family Epiplemidæ has hitherto been known from India and Ceylon. Groundcolour greyish light brown with brown dotted outer and inner lines on both wings. On forewing both lines are rudimentary and difficult to trace; outer line protrudent outward at veins 4 and 6. On hindwing outer line starts outwards from the black dot at costal margin, and after bending in cell 8 runs parallel with outer margin, to which the inconspicuous outer marginal line also parallel; inner and basal lines are quadrantal. At the end of discoidal cell in each wing is one oval vitreous spot, but inconspicuous in forewing. Outer margin of forewing scooped out from under apex to cell 3 and in this part ciliae entirely white. At the ends of veins 4 and 7 of hindwing there are small teethlet, but at vein 4 inconspicuous. Both undersides paler, basal half in hindwing whitish, the rest area is greyish.

Venation: both wings vein 2 from the lower edge of the cell near the base, 5 from the middle of discocellular, 6 and 7 with a short stem from the upper angle of cell; in forewing 8 and 9 with long stalk, 11 given off from 10 and anastomosing 12.

♂ length of forewing 8~8.5mm, expanse 17mm.

2 ♂ ♂, Mt. Yuwandake, 7 VIII 1961.

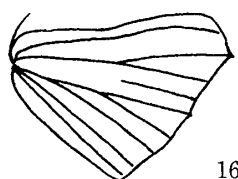
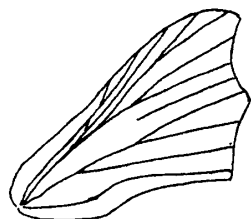


Fig. 16 Venation  
of *M. emarginatum*  
HAMPSON

Family GEOMETRIDAE

In this family about 90 species were captured. On this paper the authors described 14 species belonging to subfamily GEOMETRINAE, besides several other species were caught which are presently under investigation. Most of these species are common in mountainous subtropical forest covering all Amami-Oshima.

(The mark\* at the specific name shows it was hitherto unknown from this region).

\**Pingasa ruginaria* GUENEE (Fig. 17, 31 & 32)

Hist. Nat. Ins. Lep., i: 278, 1857.

This fine and graceful species considerably alike the other species of the same genus in Japan, but distinctly differs from them by the following points: black postmedial line projects convexly outward on cells 2~4 in forewing and on cells 1-c & 2 in hindwing; submarginal white line is unordered and not wavy in hindwing; outermarginal areas of cells 1-b~2 in forewing and of cells 1-b & 3 in hindwing are white or yellowish-white in patch; under surface of the basal areas in both wings are orange yellow. Outward of postmedial line is various in colour per specimen, most of them light purple grey but some with greenish, brownish, or reddish tint. Costal area of forewing greenish

grey. Vertex and prothorax in dorsal also greenish grey. Palpus long; the third segment club-like, straightly porrecting forward, much longer in the female than in the male.

♂ length of forewing 19~20mm, expanse 35~39mm;

♀ length of forewing 21~22mm, expanse 37~40mm.

1 ♂ 1 ♀, Taken, 30 VII 1959; 5 ♂ ♂, Mt. Yuwandake, 2 VIII 1959; 2 ♂ ♂, ditto, 7 VIII 1961; 11 ♂ ♂, ditto, 11 VIII 1961; 2 ♂ ♂, ditto, 15 VIII 1961; 2 ♂ ♂, Yakugache, 13 VIII 1961; 1 ♀, Nazé, 21 VII 1961.

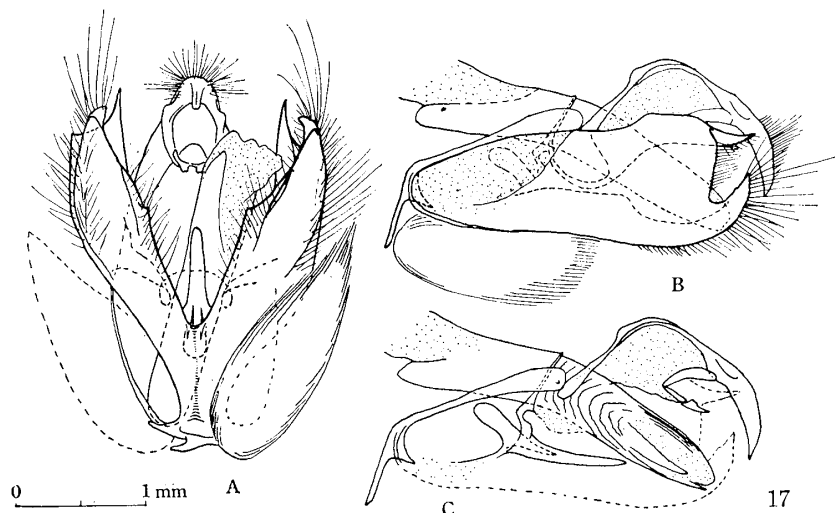


Fig. 17 ♂-genitalia of *Pingasa ruginaria* GUENEE A: abdominal aspect. B: lateral aspect. C: interior, the left valva is cut away.

*Dindica virescens yuwanina* ssp. nov. (Figs. 34 & 35)

Somewhat larger than the typical *virescens* from Honshū: ♂ length of forewing 20~21mm, expanse 37~41mm and ♂ genitalia also larger. But the most remarkable character of this new subspecies is on the underside of both wings, viz. the outer half areas generally are very black while the typical race with submarginal greyish or pale reddish brown colour, with turbid yellowish margin. On upperside of hindwing the pale basal half in contrast with the darker outer one.

Holotype: 1 ♂, Mt. Yuwandake, 15 VIII 1961

Paratypes: 1 ♂, Mt. Yuwandake, 23 VIII 1960; 3 ♂ ♂, ditto, 2 VIII 1959, 7 VIII 1961; 7 ♂ ♂, ditto, 11 VIII 1961; 4 ♂ ♂, ditto, 15 VIII 1961; 1 ♂, Yuwan, 14 VIII 1961; 1 ♂, Yakugachi, 13 VIII 1961

*Agathia lycaenaria lycaenaria* KOLLAR (Fig. 33)

Hügel's Kashmir 4:486, 1844.

The authors judge the Amami race belongs to the typical one.

1 ♂, Nazé, 5 VIII 1961; 2 ♂ ♂, Yakugachi, 13 VIII 1961; 1 ♀, Yuwan, 14 VIII 1961, 6 ♂ ♂ 1 ♀, Mt. Yuwandake, 15 VIII 1961

\**Tanaorhinus reciprocata confuciarum* WALKER

List Lep. Ins. Brit. Mus. 515, 1861

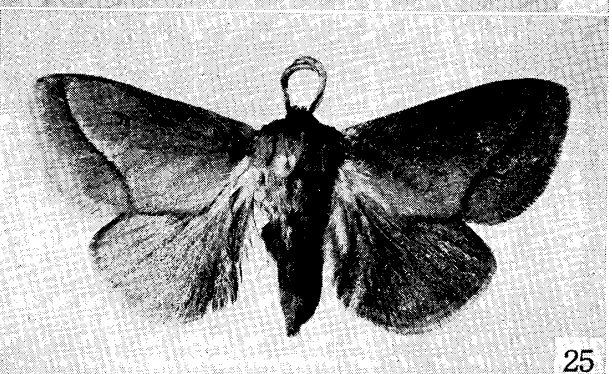
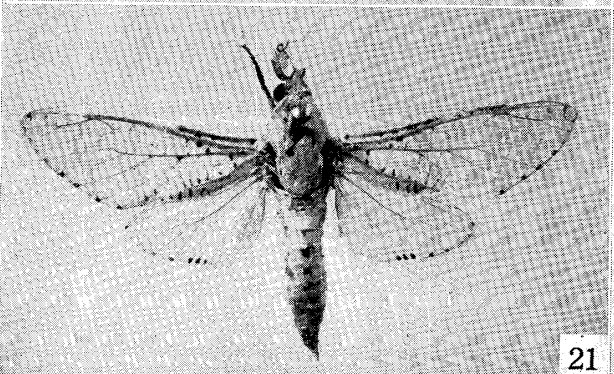
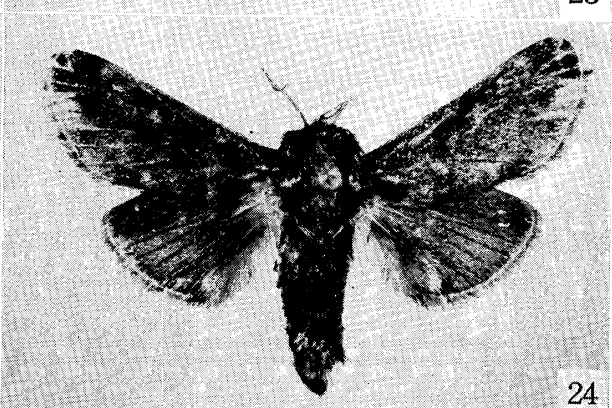
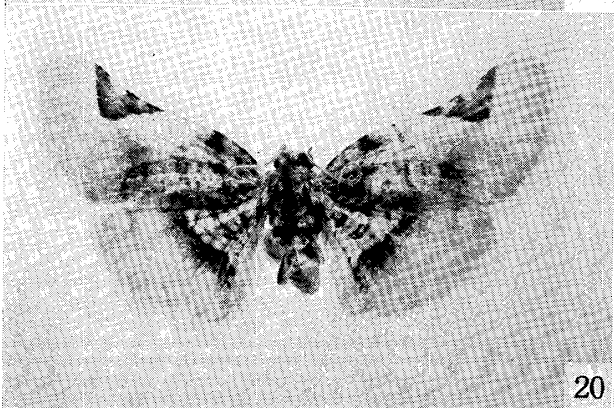
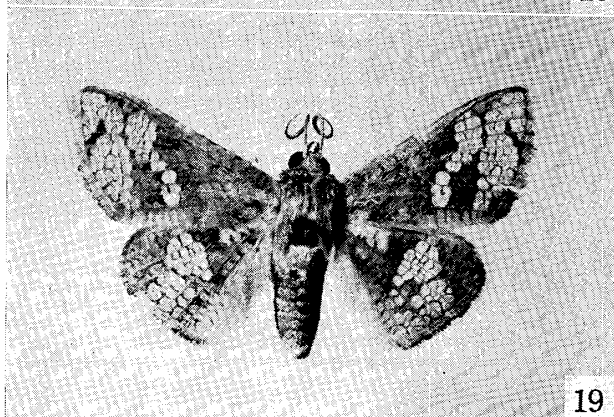
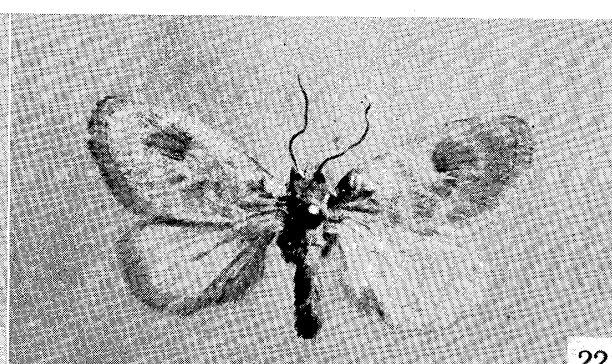
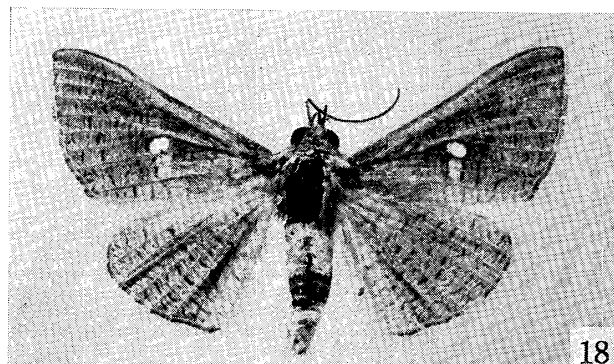
1 ♂, Mt. Yuwandake, 15 VIII 1957. Length of forewing: 32mm.

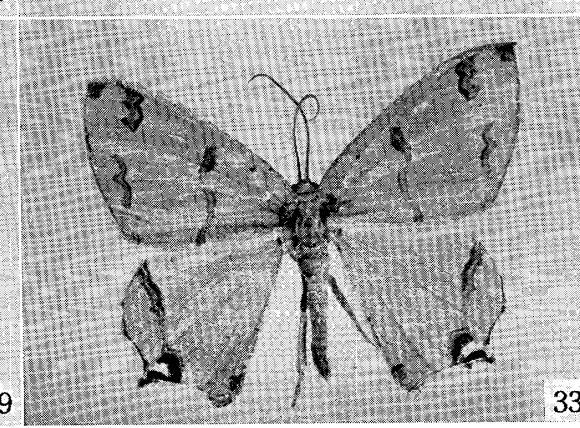
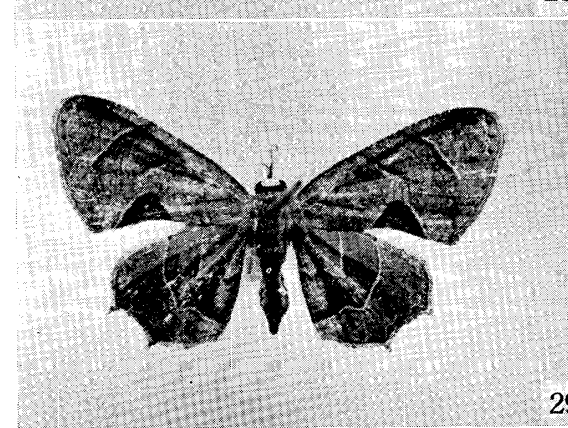
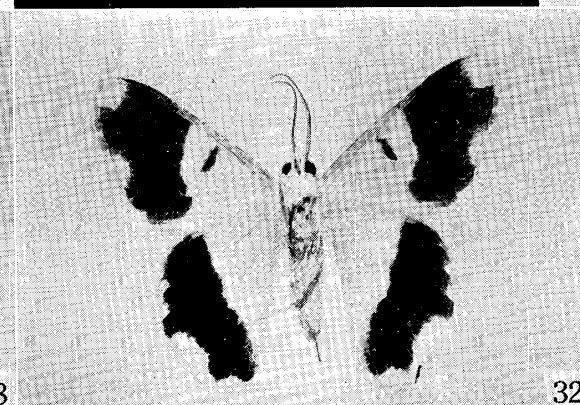
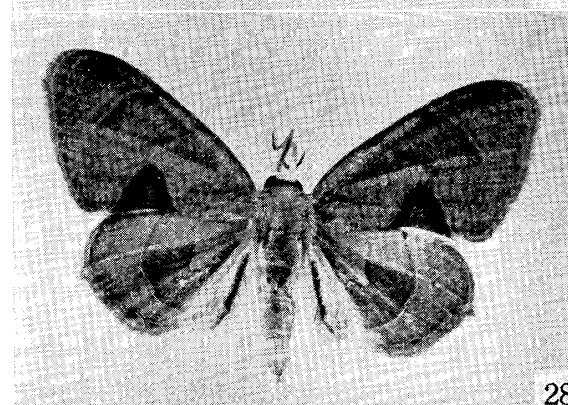
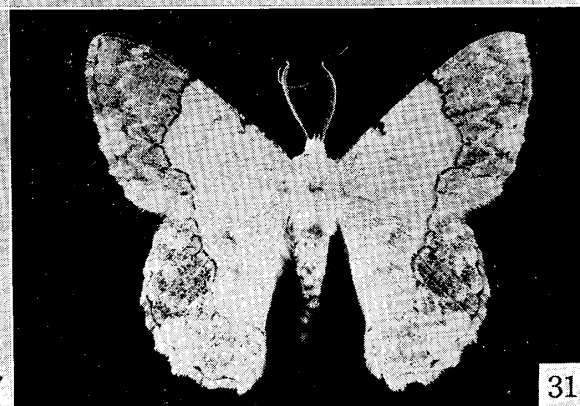
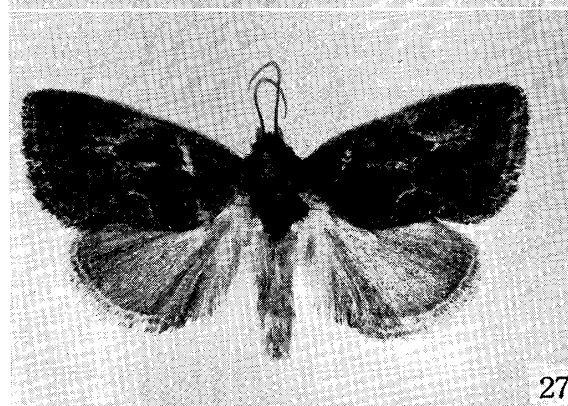
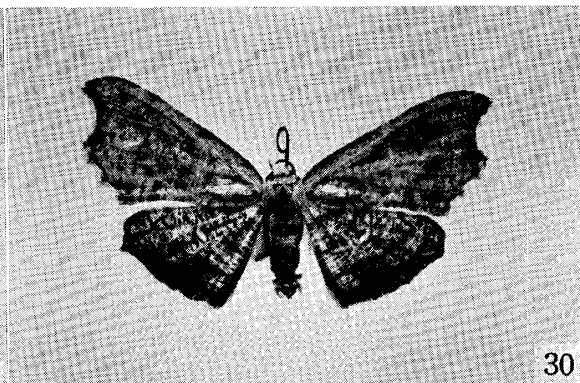
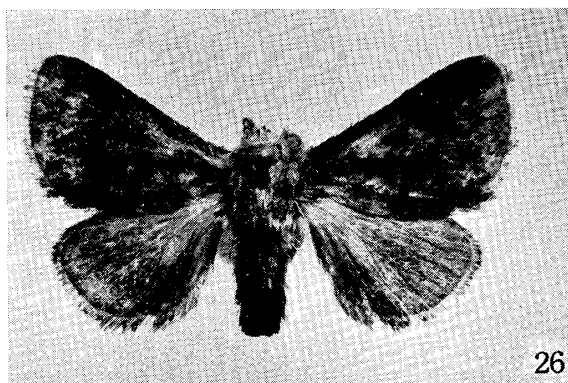
This is not different from Honshū-specimens. Very rare in this Island.

\**Thalassodes quadraria* GUENEE

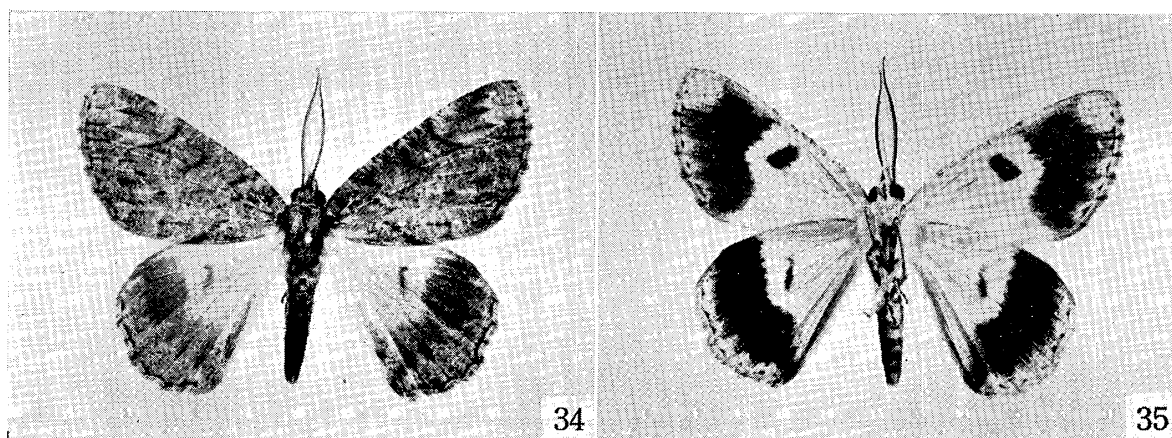
Spec. Gén. Léop. 9:360, 1858.

Very common. 2 ♂ ♂, Mt. Yuwandake, 2 VIII 1959; 3 ♂ ♂, ditto, 7 VIII 1961; 8 ♂ ♂ 2 ♀ ♀, 11 VIII 1961; 13 ♂ ♂, ditto, 15 VIII 1961; 1 ♂, Nazé, 1 V 1960 (T. KODAMA et A. MUTUURA leg.); 1 ♂, ditto, 6 VIII 1961.









- Fig.18 *Rhodoneura myrsusalis* WALKER ♂      Fig.19 *Rhodoneura semitesselata* WALKER ♂  
 Fig.20 *Camptochilus sinuosus* WARREN ♂      Fig.21 *Zeuzera coffeae* NIETN ♂  
 Fig.22 *Narosa amamiana* sp. nov. ♂      Fig.23 *Arbelarosa issikii* sp. nov. ♂  
 Fig.24 *Belippa horrida* WALKER ♂      Fig.25 *Narosoideus flavidorsalis* STAUDINGER, ssp. ♂  
 Fig.26 *Praesetora japonica* sp. nov. ♂      Fig.27 *Phrixolepia tenebrosa* sp. nov. ♂  
 Fig.28 *Balantiucha mutans minuscula* ssp. nov. ♂      Fig.29 ditto, ♀  
 Fig.30 *Metorthochilus emarginatum* HAMPSON ♂      Fig.31 *Pingasa ruginaria* GUENEE ♂  
 Fig.32 ditto, underside ♂      Fig.33 *Agathia lycaenaria lycaenaria* KOLLAR ♂  
 Fig.34 *Dindica virescens yuwanina* ssp. nov. ♂      Fig.35 ditto, underside ♂

*Chloromachia infracta* WILEMAN

Trans. Ent. Soc. Lond. 1911:342, 1911

Not rare throughout the low elevation in Ohshima. 1 ♂, Nazé, 23 VII 1959; 1 ♂, ditto, 18 VIII 1960; 1 ♂, Yuwan, 19 VIII 1961; 2 ♂ ♂, Yakugachi, 13 VIII 1961; 2 ♂ ♂, Yuwan, 14 VIII 1961.

\**Jodis urosticta* PROUT

Novit. Zool. 35:295, 1930.

1 ♀, Yakugachi, 13 VIII 1961.

\**Rhomborista megaspilaria lyra* SWINHOE

Trans. Ent. Soc. Lond. 1892:6, 1892

1 ♀, Nazé, 6 VIII 1961.

\**Comibaena praeimbria* PRYER

Cist. Ent. 2:232, 1877.

Widely inhabiting throughout the whole land of Amami-Oshima.

1 ♂ 1 ♀, Nazé, 23 VIII 1959; 2 ♂ ♂, ditto, 15 VIII 1960; 2 ♂ ♂, ditto, 21 VII 1961; 1 ♂, ditto, 5 VIII 1961; 1 ♂, Taken, 28 III 1959; 2 ♂ ♂ 2 ♀ ♀, ditto, 18 VIII 1960; 2 ♂ ♂, ditto, 8 VIII 1961; 1 ♀, Yuwan, 22 VIII 1960; 1 ♂, ditto, 19 VII 1961; 1 ♂, Mt. Yuwandake, 23 VIII 1960; 3 ♂ ♂ 1 ♀, ditto, 7 VIII 1961, 2 ♂ ♂, ditto, 11 VIII 1961; 3 ♂ ♂ 2 ♀ ♀, ditto, 15 VIII 1961; 1 ♂, Wan (Kikai-ga-Shima, KISHI leg.), 31 VII 1960.

\**Comibaena obsoletaria* LEECH

Ann. Mag. Nat. Hist. (6)20: 238, 1897.

1 ♂, Nasé 5 VIII 1961; 2 ♂ ♂, Yakugachi, 13 VIII 1961

\**Comibaena amoenaria* OBERTHÜR

Etud. Ent. 5:48, 1880.

Common. 2 ♂ ♂, Mt. Yuwandake, 7-VIII-1961; 2 ♂ ♂, ditto, 15 VIII 1961; 2 ♂ ♂, ditto, 11 VIII 1961

\**Thetidia albocostaria* BREMER

Mém. Acad. Sci. St. Pét. (7)8: 76, 1864

3 ♂ ♂, Nazé, 23 VII 1959

*\*Comostola subtiliaria nympha* BUTLER

Trans. Ent. Soc. Lond. 1881: 411, 1881

Common. 3 ♂♂, Nazé, 23 VII 1959; 1 ♂, Tōjō (Sumiyōson), 24 XII 1960; 1 ♂, Yakugachi, 13 VIII 1961; 2 ♂♂ 2 ♀♀, Mt. Yuwandake, 7 VII 1961; 3 ♂♂ 1 ♀, ditto, 11 VIII 1961; 1 ♀, ditto, 15 VIII 1961; 1 ♂, Wan (Kikai-ga-Shima), 31 VII 1960 (KISHI leg.).

*\*Comostola rubripunctata* WARREN

Novit. Zool. 16:125, 1909.

1 ♀, Nazé, 18 VII 1961

## 摘 要

1957年以来筆者の一人川副は奄美群島の主として奄美大島において蛾類の採集を行い、現在までに大蛾類20科約350種を得た。ここに第一報として次の5科31種を報告する。

1. マドガ科 シロテンマドガ (新称, Fig. 18), ウンモンマドガ (新称, Figs. 1, 2 & 19), キイロマドガ (Fig. 20), アカジママドガ, アミマドガ, ヒメシロマドガ (Figs. 3~4)
2. ボクトウガ科 コフイゴマフボクトウ (Figs. 5 & 21)
3. イラガ科 アマミウスキイラガ (新種新称, Figs. 6, 7 & 22), ペニモンイラガ (新種新称, Figs. 8, 9 & 23), ツマジロイラガ (Fig. 24), ナシイラガ (Fig. 25), ヘリスジイラガ (新種新称, Figs. 10 & 26), アマミアカイラガ (新種新称, Figs. 6, 7 & 22)
4. フタオガ科 キスジシロフタオ, ハガタフタオ, アマミマルバネフタオ (新称, Figs. 14, 15, 28 & 29), エグリフタオ (新称, Figs. 16 & 30)
5. シャクガ科 (アオシャク亜科) ソトムラサキアヤシャク (Figs. 17, 31 & 32), ウスアオシャク (Figs. 34 & 35), マダラチズモンアオシャク (Fig. 33), カギバアオシャク, クスアオシャク, ヒメシロフアオシャク, ウスキヒメアオシャク, ウラジロアオシャク, ヨツモンマエジロアオシャク, ヨツテンアオシャク, ヘリジロヨツメアオシャク, ヨツメアオシャク, コヨツメアオシャク, アカホシヒメアオシャク。

## ヤクシマフトスジエダシャク四国本島より発見

川 副 昭 人<sup>1)</sup>A record of *Chogada yakushimana* from Shikoku

By AKITO KAWAZOE

屋久島より記載されたヤクシマフトスジエダシャク *Chogada yakushimana* INOUE はその後九州本島最南端の佐多岬から発見され、さらに四国西南海上高知県沖の島からも1960年7~8月に京都平安学園高校の手によって多数採集された。しかし四国本島からはなお未知であったところ、本年(1962)8月10日、筆者は勤務校の布施市立日新高校自然科学部員と共に紀伊水道に面した東海岸からその1♂を採集したので、ここに報告する。場所は高知県安芸郡大洋町(旧野根町)別役で、徳島県境にごく近く、海岸から約5 kmほど入った所である。同地はカンランの産地として名があり、山麓まで原生林が残っていて、ミナミヤンマの飛翔も見られる。なお、同時にオオツバメエダシャク *Amblychia angeronaria* GUENÉE 1♂を得たが、この種の分布地としてもここが既知の東限ということになる。

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